



MCCC NEWS

Mid-Cities Commodore Club, Inc.

January 86 Vol. 4 Issue 1

PROGRAMMER'S CORNER

by Bob Lawson, Librarian, Night Chapter

The holidays are now behind us and it's time to get into some serious programming techniques. Before we begin, apologies are in order. If you took the time to type last month's program you found it didn't work. The offending lines were lines 60 and 140. Line 60 should read POKER+L,A. Line 140 should read, FOR L=0TO 15. For those of you who patiently waited a year for corrections, I thank you. For those of you who made the threatening calls, I am offering a double-your-money-back guarantee. On to this month's magic.

Every once in a while, a programming routine comes along which shocks the programming community. In 1983 I thought I had stumbled upon such a routine. I had written a game program and decided to add a music routine. Rather than rewrite my program to insert music, I decided to make a separate program of the music and use a load routine in the game to daisy-chain my second program. This sounded OK to me in theory, so, I jumped in with both feet and began my task. The music sounded great and fit the theme of the game perfectly. So, I added a load routine to the game, resaved it, and sat back to watch my masterpiece. At the point where the game was supposed to load the music, the program went off into oblivion. What happened? I started researching frantically to figure out what was wrong. Lo, and behold, Commodore added a feature to their machines which carry variables over to the next program when the second program is loaded by the first. OK! Time for a re-write of my game. I put my music variables in the game and tried again. I couldn't believe my eyes - another bomb. Back to the manuals, I discovered that the second program must be larger than the one which loads it. It seems that both of the programs will

occupy the same memory locations, otherwise. This simple task was beginning to turn into a can of worms.

Frustration turned into determination. There had to be a way to load that second program. I started experimenting. I found that I could print a command on the screen cursor up to it, hit my return key and the command would execute. With that thought in mind, I wrote the following routine:

```
1000 PRINTCHR$(147)
1010 FORR=1TO10:PRINTCHR$(17):NEXT
1020 PRINT"PRESS RETURN."
1025 PRINT"WHEN YOUR DRIVE STOPS,
      PRESS RTN AGAIN."
1030 PRINTCHR$(17);CHR$(17);CHR$(17);
      "LOAD"+CHR$(34)+"PRG NAME"+CHR$(34)
      +",8,1"
1040 PRINTCHR$(17);CHR$(17);CHR$(17);
      "RUN"
1050 FORR=1TO10:PRINTCHR$(145):NEXT
1060 STOP
```

The routine worked OK but required the user to keep pounding the keyboard. commercial software didn't work this way. So, there had to be a better way. A brilliant idea popped up. Why not link an auto-run utility to my music program and alter my load routine slightly.

```
1000 PRINTCHR$(147);CHR$(17);"PRESS RTN"
1010 PRINTCHR$(17);CHR$(17);CHR$(17);
      "LOAD"+CHR$(34)+"PRG NAME"+
      (CHR$(34)+",8,1"
1020 FORR=1TO5:PRINTCHR$(145)
1030 STOP
```

The routine worked like a dream. There I was - fat, dumb, happy, and convinced I had made a major discovery. For two years I walked around, smug and satisfied I had something no one else did. Then I read an article which applauded the attributes of



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January 1986



Jan. 11 Usual meeting time:
GRAND PRAIRIE CHAPTER 1:30 PM
G. P. Public Library

ARLINGTON CHAPTER 10:00 AM
Downtown Arlington Library

***** NEW TIME!!! *****
FT. WORTH CHAPTER 1:30 PM
GDRA, Room 2

Jan. 18 MCCC QUARTERLY MEETING 1:30 PM
Hurst Recreation Center

Jan. 18 is the NL Deadline
for the February Issue.

Jan. 20 FT. WORTH NIGHT CHAPTER 7:00 PM
St. Elizabeth Episcopal Church

Jan. 21 Usual meeting time:
GRAND PRAIRIE CHAPTER 6:00 PM
Grand Prairie Public Library

Feb. 1 Board of Directors Mtg. 10:00 AM
Western Hills Inn

SUN MON TUE WED THU FRI SAT

			1	2	3	4 Board Mtg.
5	6	7	8	9	10	11 Arlington G. P. Ft. W.
12	13	14	15	16	17	18 MCCC Qrtly Meeting
19	20 Ft. Worth Night	21 Grand Prairie	22	23	24	25
26	27	28	29	30	31	

a technique called the DYNAMIC KEYBOARD. This technique was discovered in 1978. My bubble burst! I was a nobody again! Oh, well, if I can't be a somebody I can at least share the limited knowledge I have managed to dig up. What is the Dynamic Keyboard and how does it work? In simple terms, the idea is to have your program poke the CHR# values of one or more characters into the memory locations associated with the keyboard buffer, and, then, when the program ends, the computer will print the READY message followed by the commands or characters stored in the keyboard buffer and then respond as though these characters or commands had been manually typed in. The memory locations are decimal 631 thru 640. In addition, location 198 contains the count routine which must hold the count of the characters poked into the buffer.

The real magic comes when your program prints an executable command on the screen and then positions the cursor over that command. A CHR# value of 13 (carriage return) is executed from the keyboard buffer and the computer does whatever the statement tells it to. Let's look at the following routine and see how it's done.

```
1000 PRINTCHR$(147);CHR$(17);CHR$(17);
    CHR$(17)
1010 PRINT"LOAD"+CHR$(34)+"PRG NAME"+
    CHR$(34)+",8,1"
1020 PRINTCHR$(145);CHR$(145);CHR$(145)
1030 POKE631,13:POKE632,82:POKE633,85:
    POKE634,78:POKE635,13:POKE198,5
1040 END
```

Line 1010 prints an executable

statement on the screen. Line 1020 positions the cursor so that when the program ends at line 1040, the cursor will be over the load command. In line 1030, the 5 tells the computer how many keyboard characters to get. The first 13 is a carriage return. This causes the load command to execute. After execution the computer returns to the keyboard buffer and gets the next character. In this case, it prints the word RUN, followed by another carriage return, and then executes the command.

Really clever programmers can print up to 10 commands on the screen, and cause all of them to be carried out. The trick is the spacing. Some very unusual and sophisticated routines are created this way. The following example deletes a program line while running. Imagine the possibilities of program protection:

```
1000 REM **THIS LINE WILL BE DESTROYED**
1010 PRINTCHR$(147)
1020 POKE631,19:POKE632,49:POKE633,48:
    POKE634,48:POKE635,48:POKE636,13:
    POKE 198,6
1030 END
```

I'll leave you with a task. See if you can create a routine using the Dynamic Keyboard technique which exits to the command level, executes another routine, and then returns to the program. Send your solutions to me and the really good ones will be used in a future article.

Next month we'll examine "FLASHERS". Hope you enjoyed yourself. I know I did. Until next month, HAPPY PROGRAMMING.

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ON-LINE

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GENIE, a First Look: The latest entry into what is fast becoming a crowded field of on-line services, is GENIE, the General Electric Network for Information Exchange, run by the General Electric Information Services Co., of Rockville, Md. Launched October 1, 1985, the national network looks like a winner. I gave it a try, and so far I'm quite pleased. In this two-part review we'll look at what GENIE has to offer, some hints on getting the most from it, and its limitations compared to other services. To start off, I suggest that you take advantage of GENIE's freebie offer, as I did, by calling 1-800-638-8369; use 300 or 1200 baud, 8 bit word size/no parity, 1 stop bit, and HALF duplex. When you detect a carrier DO NOT hit RETURN, but type "hhh", again no RETURN. When you see the prompt "UH=", enter "VJM11950, GENIE"--RETURN is needed here. This entry is a guest ID and password. If you see the prompt "P>" hang up and try again. The demo shows off the network, and lets you sign up on-line.

GENIE is a full featured generic affair, not dedicated to one brand of computer. Offerings include live chats, bulletin boards, special interest groups, conferencing, file transfers via XMODEM, shopping and games. Economy is GENIE's strongest selling point; evening/weekend service costs \$5 per hour for 300 or 1200 baud connection. Access is via GE's own phone network, meaning a local call for most of us. However, subscribers in rural areas will incur a \$2 per hour surcharge--a tariff not mentioned in ads I've seen. A sign-up fee of \$18 is also levied, but until January 1, 1986, includes a \$15 use credit. Absent are minimum monthly fees and additional costs for "premium" features. Billing is via VISA, MasterCard or electronic debit from your checking account. When you sign up on-line you can create your own password of up to 8 characters. After verifying your credit info, a representative will call and give you your assigned ID number (which, unlike IDs for other networks, should be kept confidential). A few days later you'll

receive the GENIE Users Guide, a 5x7 inch manual in a 3 ring binder. I found the documentation to be among the best I've encountered. Clear, concise, and well organized, it contains useful examples, a comprehensive index, an unusually detailed table of contents, and a national directory of access phone numbers.

Customer support from GENIE is excellent. Their folks can be reached during business hours at 1-800-638-9636, ext. 21. They responded to my inquiries in a polite and helpful manner. At one point a service aid candidly admitted not knowing the answer to my question, but said he would get back to me; he did so in a matter of hours. I think that's refreshing and far superior to many other outfits which seem to have a "when-in-doubt-mumble-fake-it-but-say-anything-to-get-rid-of-'em" policy. My only gripe is GENIE's tendency to be too formal. For example, you are first asked for your name, ID, and phone number; not bad, but if the technical folks are unavailable, your questions are entered into a database and you're tagged with a 7 digit inquiry number. This is a bit bureaucratic, but does spare you from having to repeat your questions to a string of different people.

GENIE is a highly, but uniformly, structured network. A tree of short menus is supplemented by command and expert modes that speed your navigation as you gain experience with the system. Each menu is paginated, titled, and flagged with a 3 letter mnemonic that you can type at any system prompt to display that menu (e. g., "TOP" brings on the main menu, page 1). Many different areas of GENIE share a common organization, consisting of a chat/conference mode along with subject related bulletin boards. The boards are further partitioned into topics, and finally messages. Thus, you can target some very specific regions that strike your fancy, without being forced to scroll through junk you would rather ignore. Many system segments also share common commands, making GENIE a breeze to learn and use.

In a nutshell, here's a rundown of GENIE's major departments. Electronic mail permits you to exchange private messages with other subscribers; text can be prepared on or off-line. News and commentary covers information on computer and related topics, as well as feature articles and

regular columns. The LiveWire CB simulator is essentially typical of free-for-all chat modes offered by competing networks. Special lectures and public or private forums are available under real time conferencing. RoundTables encompass special interest groups, each having its own downloadable software libraries, bulletin board and on-line conferences. A shop and swap section, aptly dubbed the "Electronic Yard Sale", lets you buy, sell or swap goods and services with other enthusiasts. The GENIE game room contains an assortment of text adventure and classic amusements. Finally, a menu of user settings and account information not only displays your billing data, but also implements some of the most powerful fine tuning of terminal parameters I've seen. Let's take a closer look at some of these features.

I suggest that at your first GENIE session, you go directly to the section on user settings. At the system prompt ("Enter#, <P>revious, or <H>elp?") simply enter "SET" or select TOP Menu item 9. Here you should adjust your terminal parameters; most important are page width/length, and the "break" character. If your terminal program does not generate a true break--most don't--try assigning chr\$(3), Control-C, as the break signal. The break will get you out of most jams and is needed to execute some electronic mail and upload maneuvers. You may also customize the delete and prompt characters. In addition, this is where you can establish your default CB handle, which can be up to 24 characters long. Likewise, the settings arena is the place to alter your password (eight characters maximum). Once you are content with these variables, be sure to exercise the "save" option so that GENIE will "remember" them. The network's latest phone access directory may also be displayed from this area. By the way, the phone directory flags surcharge zones, and numbers dedicated to 1200 baud.

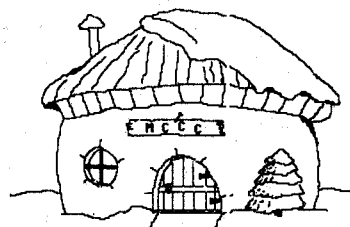
A fascinating and potentially profitable part of GENIE is Shop N' Swap, the "Electronic Yard Sale". It's really much more, though, considering the national audience you can reach and the wide variety of categories: software, general merchandise, pets and animals, motor vehicles, real estate, positions wanted, and help wanted. Therefore, should you have an elephant to sell or a condo to

rent, this is the place to look. Budding software authors out there would also do well to tout their programs in this section.

In part two of this series we will continue our review of GENIE.

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Paul J. Motise
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OPTICAL DELIGHT

Here is a little program to tease your eyes. A present from THE CEBUG SWATTER, the Commodore Erie Bay Users Group, Sandusky, Ohio.

```
10 POKE 53280,0:POKE 53281,1:PRINT CHR$(147): POKE 53281,0:POKE 53272,18:
CS=2304
20 FOR I=0 TO 1 STEP 0:B=RND(1)*256:
FOR J=1 TO 10:POKE CS+J,B:NEXT J,I
```

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GAME MAKER

Activision Software

I guess everyone at one time or another has wished they could create their own games and have them be as good as the best sellers. Now you can with the help of Garry Kitchen's Game Maker.

The package is actually a group of programs that allow you to create your own game. SCENE MAKER allows you to create the background or scenery that will be used in your game. SPRITE MAKER allows you to draw the sprites or characters that will be used. There are also the SOUND and MUSIC MAKERS that add life to the games you create. With MUSIC MAKER you can select from a variety of scores all contained on the same disk.

Activision's unique "Make-A-Disk" feature (first available with THE COMPLETE FIREWORKS CONSTRUCTION KIT) is also a part of this package and allows you to send your newly created games to your friends.

Since there are no other utilities of this type readily available, it is difficult to rate. The program lets you create games that are varied enough that you will not soon become bored with the process. Like so many do-it-yourself programs that are appearing on the software shelves, your success and enjoyment with Game Maker will depend partly on your own creativity, skill and time. However, the results will be uniquely yours.

THE CRIMSON CROWN

Polarware

Review by Laura Clements

I strolled leisurely across the glen with no particular destination in mind. The trapdoor released beneath me hurtling me down to musty caverns of unknown quantities. The golden orb on the wall hypnotized me with its pulsations; it was cold to the touch and immovable. The vampire's eyes provided the only light around; his dire warnings sent cold chills

up my spine. Then the ceilings and walls all collapsed around me, sealing my entrances, and maybe my exits.

Whatever happened to the old adventure games? They are now called "illustrated interactive novels". Crimson Crown gives the player (traveler?) the option of having a text-only game or a graphics and text game. The graphics are not fantastic, but the disk access time is minimal. The parser is fairly good, and will take complex and even compound commands.

Crimson Crown fairly shrieks with the eerie aura of Transylvania, and makes one tend to look over one's shoulder constantly.



LAW OF THE WEST

Accolade Software

As Sheriff of Gold Gulch, you will have the opportunity to meet a variety of of characters from friendly townspeople to nasty gunslingers. The game starts in a street scene where a character walks out and begins talking to you. The mood may be angry, happy or neutral. 'Conversation lines' give you a chance to reason before you shoot, however, you only have the choice of four responses. As you proceed through each encounter, the game keeps track of how well you maintain your authority. The game ends if you survive until sundown or when you are fatally wounded.

Despite the excellent graphics and superb music, the LAW OF THE WEST lacks exciting game play. Only four background scenes are used and subsequent game sessions are very similar. Game action is relaxed unless you are drawing your gun to shoot a bank robber. Since you only have a choice of four responses, strategy does not seem to play a very vital role.

BOOK REVIEW

By Blue Rollerskate

Commodore 64 Expansion Guide (1985)
by Gary Phillips, Tab Books Inc.,
Paperback, \$16.95

Reprinted from The Boston Computer Society
Gary Phillips presents us with a guide to hardware peripherals for the C-64, both Commodore-produced and third-party equipment. He rates them as to price, performance, and quality. The book covers interface, dot-matrix and daisy-wheel printers, modems, monitors, disk drives, and miscellaneous. Each item is carefully described and rated according to a unique uniform rating worksheet.

For the items he discusses, at least those I am familiar with, Phillips does an excellent job. But he doesn't point out some defects that a relatively new user might not think to question. The MSD disk drive, for instance, is reluctant to load many commercial games and is not 100% compatible with several important software packages. He mentions only three programs of this nature that he tested which were compatible.

However, my main criticism of this book is what has been left out. There is no mention of any of the C-128 peripherals such as the 1571 drive or the 1902 monitor which are C-64 compatible, nor of any older PET peripherals that work with the C-64 (the 4004 or the 1001) through the IEEE interface. (He does describe the CIE/IEEE interface and briefly dismisses the possibilities inherent in that.) There is no mention even of the 1526 printer. Important third-party peripherals like the Indus disk drive and the Westbridge modem are not mentioned at all.

There are several other features of this book that should be mentioned since they have real value although they aren't expansion hardware reviews, namely the appendices and the glossary. Occupying a full one-third of the text, these pages collect material such as vendor and user group addresses that are usually hard to find in one place. The author also includes a listing of bulletin boards and cites a few of the Commodore-dedicated magazines. The glossary is good. It contains much of the computer jargon that we tend to use daily and rather loosely. I was surprised to find a few definitions that were not quite what I had thought

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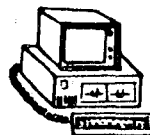
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them to be. These were so clear and to the point that I was (reluctantly) forced to alter my previously held notions.

All in all, this book represents a good deal of effort. Whatever inadequacies it may have are made up for by the bellsisties in the appendices and glossary. I would recommend it for a new C-64 user who is not a computer buff but needs a fairly superficial look at what is available. With the C-128 now on the scene, waiting for the next edition might be advisable.

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PHOTOGRAPHING THE C.R.T. SCREEN

By Mike Donat

Reprinted from The Expansion Port, Northwest Arkansas Computer User's Association

Photographing the CRT screen can be a very frustrating experience. You can use a screen dump utility in many cases, but what if you don't have a color printer. Automatic cameras do not work too well in automatic mode for CRT photography, so set on manual for best results. A single lens reflex camera is highly recommended. Here are a few tips that can help you make good screen shots.

* Exposure can be a problem. Poke the screen and border with color value 11. Type the following:

POKE 53280, 11: POKE53281,11

Then press RETURN.

The screen will turn grey. Use this screen to determine the exposure with your camera. Once exposure is determined, load the screens you wish to photograph. Don't forget to bracket exposures. Shoot at least one f-stop over, one f-stop under the indicated exposure if you are using slide film. If you are using color print film or black & white, you probably don't need to bother.

* Get absolutely square to monitor. If your camera has a grid on the view finder screen use it to align the image.

* Work in a completely dark room to avoid reflections on the front of the screen. Any stray light in the room will cause a loss of contrast and those great colors will turn muddy in a hurry.

The following exposure table may be of some help as a starting point. Remember, however, that everyone's monitor is tuned differently with respect to contrast and brightness. Use this table as a starting place for experimentation. Slow shutter speeds are necessary (under 1/60th) in order to allow the TV scan to move all the way through the picture. At these speeds, a tripod and cable release or a firm support of some kind is essential.

Film speed (ASA)	Time	Aperture
50	2 sec	f2.8/f4.0
100	1 sec	f2.8/f4.0
200	1/2 sec	f2.8/f4.0
400	1/4 sec	f2.8/f4.0

C-128 PROGRAM

By William B. Sanders

Reprinted from San Diego Commodore Users' Group

After some delay, I finally have come up with a program for the Commodore 128 (in the 128 Mode) for doing something of possible use. When updating ASSEMBLY Language For Kids: Commodore 64 for the 128 Mode, I wanted to put listings from the built-in monitor into sequential files so that they could be loaded up into my word processor. (Far be it from me to point out that some other books that claimed to be for the C-64 & 128 only contained listings that worked in the C-64 Mode. That would be tacky, and I'd never do that!) In order to avoid mistakes, I wanted to create a program that would "take a picture" of the screen of the disassembled listing. By PEEKing into the screen locations where the information was stored and putting the information into an array, it was possible to put them into sequential files quite easily. For you newsletter editors out there, and folks who want to send listings of assembly language programs over the modem, this you may find useful.

```

10 DIM A$(23)
20 FOR X=1024 TO (1024+(40*23)) :
  IF PEEK(X)<32 THEN GOSUB 190:
  ELSE GOSUB 200
30 J=J+1 : IF J=40 THEN GOSUB 210
40 NEXT
50 FOR K=1 TO 7 : PRINTCHR$(7);
  :NEXT
60 PRINTCHR$(147);: PRINT"INSERT
  SEQDISK&REMOVEPROGRAM DISK"
65 GETA$:IF A$="" THEN 65
70 PRINTCHR$(147)
80 DIRECTORY
90 PRINT: INPUT"FILENAME";NF$
100 NF$=NF$+"",S,S,W"
110 OPEN2,8,2,NF$
120 FOR X=0 TO 23
130 PRINT#2,A$(X)
140 NEXTX
150 CLOSE2
160 FOR X=1 TO 7:PRINTCHR$(7);:
  NEXT
170 PRINT CHR$(147);:PRINT"INSERT
  PROGRAM DISK & REMOVE SEQ
  DISK"
180 END

```

```

190 A$(K)=A$(K)+CHR$(64+PEEK(X)):
  RETURN
200 A$(K)=A$(K)+CHR$(PEEK(X)):
  RETURN
210 K=K+1:J=0:RETURN

```

The program can be used in one of two ways. You can load your assembly program from disk and then disassemble it in the monitor, or you can simply write your program and have that listing saved to a SEQ files. Use the following steps:

1. Load the above BASIC program.
2. Enter the monitor.
3. List your program, using either D(isassemble) or M(emory)
4. Walk your program listing to the top of the screen by pressing the Return key.
5. Clear the screen from the end of the program to the end of the screen use the ESC @ sequence.
6. Enter X <RETURN> to get into BASIC and then RUN <Return>

Since the program copies the screen, it can only handle one at a time. To put larger programs into a SEQ file using this method, you will need an append program. Just change line 100 to:

```
100 NF$ =NF$+"",S,A"
```

Use the same procedure as for the first part of the program, except just list the second and subsequent parts as they are to be appended. You must run the original program before running the append version. There's probably a better way to do this, and some smart person reading this is thinking, "Boy is that guy a dummy!" Barbara would be delighted to publish your article on the improvement.

PAPERCLIP VS. WORDWRITER

By Michael LaPaglia,

Reprinted from Catalina Commodore Computer Club, Tucson, AZ

A non-expert review of 2 word processors for the C-128.

I now own 2 word processors for the C-128. PAPERCLIP128 and WORDWRITER128. I write this 'review' as a person who does NOT use a word processor every day. I do

use it about 3-5 times a month and from that point of view I offer the following.

PAPERCLIP128 is the latest version of a very good wp program. I find I can use it without having to hunt for the manual to look up commands or formats. Of course I do cheat a little. I have a file on my disk that contains my most often used format commands. PAPERCLIP128 will allow me to load files from Word-pro (PRG files), Easyscript, Superscript, and any standard sequential files. I can save text as SEQ or PRG files. This makes it very handy to edit the different types of files I receive on a monthly basis. PAPERCLIP has all the commands needed to write everything from a short note to a full length novel. PAPERCLIP128 will allow 999 40 col lines this is more than I'll ever need. I can also use the spellchecker from my PAPERCLIP64 disk to check my spelling. PAPERCLIP will work in either the 80 or 40 col mode. You can get up to a 320 col view mode on screen to check the format of your text before you print it. Sending disk commands is as easy as CTRL> 'command'. This makes it very easy to format a disk or send non-standard commands to the drive.

WORDWRITER128 is not the same program as the 64 version in fact it does not even save files the same way that as 64 version. WORDWRITER128 has built in help screens, expanding windows (ala frame-work), and comes with a very slow spellchecker. While the windows are nice at first they do become a bit distracting after the first five minutes. WORDWRITER128 uses its own type of non-standard SEQ file and because of this you have to use a conversion program (included on the WORDWRITER128 disk) in order to load any standard SEQ file. The convert prg does not even account for the PRG files of Word-Pro or PAPERCLIP. Even after converting a file to WORDWRITER128 type you must still use the 'FORMAT TEXT' command within the main prg in order to read the text. The spellchecker is very slow to use. It does let you search the dictionaries for a replacement word BUT be very careful to NOT make any mistakes when editing a misspelled word. It is possible to create a 'black hole' in your text that will destroy all of your hard work. WORDWRITER128 will only work in the 80 col mode of the C-128. I could ed view mode. Disk commands are handled from a window.

Unlike PAPERCLIP I could find no way to format a disk or to send additional commands not in the window.

For the daily user either of these programs would probably be fine (though I can see major limitations in WORDWRITER128 for a really big project). For the infrequent user I would recommend using PAPERCLIP128 over WORDWRITER128. As you can tell I LIKE PAPERCLIP. Don't let the lower price of WORDWRITER128 fool you into making a big mistake.

This review was written on PAPERCLIP-128 and saved to disk as a standard SEQ file so the NL editor could use his Easy Script to format the text. Try that with WORDWRITER sometime it's not worth the effort.

PAPERCLIP128 \$79.95 Batteries Included
WORDWRITER128 \$49.95 Timeworks Inc.

1571 DRIVE

By Michael LaPaglia

Reprinted from Catalina Commodore Computer Club, Tucson, AZ

1571 DRIVE REVIEW, TIPS, ODDS & ENDS

Two weeks after I received my C-128 computer I went down and picked up a 1571 drive. The first thing I noticed was that I had to clean off my desk so I could get the new drive in place (The 1571 is about an inch and a half wider than the 1541). So about two hours later (those of you who have seen my desk will understand the time spent), I placed it on the clean spot on my desk and fired it up. The 1571 is the FASTEST floppy disk drive I have ever seen on a Commodore computer. I tried a few tests just to see how fast it was. Vidtex is 70 blocks long. On the 1541 it takes 49 sec. to load. On the 1571 it only took 9 sec. This was too good to be true. I then tried it in the CP/M mode and found it was even faster. The C-128 system disk for CP/M takes 1 min 51 sec. on a 1541 the 1571 zipped it in to memory in 21 sec. This is unbelievable! The only sad part about the speed is that when you are in C-64 mode the speed is the same as a 1541.

I decided to format a disk and see how many blocks I had. In 1571 mode the format takes about 1 min 19 sec. The disk is formatted on BOTH sides with a total of 1328 blocks free!! What really surprised me was the fact that when I put the same disk in to my 1541 the directory said 664

blocks free. The 1571 uses track 18 sector 0 to store the bam. Byte \$03 will contain a \$80 if the disk is 1571 format and a \$00 if the disk is 1541 format. Track 53 is not used on the 1571 disk format. I'm not sure why but it is in the same place as track 18 but on the other side of the disk. The rest of track 18 is used for the directory. If you try to access a program from the back side of the disk on a 1541 drive you will get an illegal track and sector error. One of the most impressive things about the 1571 is it's ability to read and write in several different disk formats in the CP/M mode. I have been able to read Kaypro II and IV, Osborne, and an IBM system 34 5 1/4 formatted disk. This has allowed me to run Wordstar and DBASEII. Both were on an Osborn disk.

The 1571 drive uses an optical stop so it will not 'ratchet' when formatting or finding an error. This does cause a minor drawback when you try to read a disk from an improperly aligned 1541. Instead of 'ratcheting' the head to find track one the head may search for as long as 20 sec. This is a minor flaw.

The only problem I have found is that the 1571 drive is not completely compatible in 1541 mode. A few of my programs would not load on the 1571 drive in the 1541 mode. This was not a major problem for me but might cause some people to consider keeping their 1541 around as a backup.

For you C-64 owners some good news! It is possible to use the 1571 drive in 1571 (C-128) mode on a C-64. You do NOT gain any speed but you do have access to the full 1328 blocks on a 1571 format disk. Commodore provided a command in the DOS to switch between 1571 and 1541 mode. To change from 1541 to 1571 mode execute the following:

```
OPEN15,8,15:PRINT#15,"U0:M1":CLOSE15
```

This will place the drive in 1571 mode until you reset the drive. Changing the 'M1' to 'M0' will put you into 1541 mode.

The 1571 also makes it very easy to change device numbers. There are two DIP switches on the back of the drive that allow you to do a hardware change of the device number. There is also a new DOS command that will let you change the device # under software control. Type the following to change to device #9:

```
OPEN15,8,15,"U0:>"+CHR$(9):CLOSE15
```

Change the CHR\$(9) to CHR\$(8) if you want to go the other way.

After playing around with the 1571 for a couple of days I looked at the 1571 users guide. I was very pleased with the changes Commodore has made to their documentation. The users guide was a joy to read. I found very few errors and none of them would cause a new user any problems. They even included several machine language programs for the advanced user.

All in all I find the 1571 drive to be a very good buy for the C-128 and an excellent second drive for the C-64.

ENTERING DATA STATEMENTS PAINLESSLY

By DAVID LOVELOCK

Reprinted from the Catalina Commodore Computer Club, Tucson, AZ.

Of the many things that can be done while sitting in front of a computer keyboard, typing programs from magazines such as COMMANDER, RUN, and COMPUTE! is one which occupies much of my time. In general I don't complain about the time spent in this way, partly because it is both interesting and educational to decipher what each line does. However, some of the programs that I enter contain BASIC loaders for machine language programs, and I derive no pleasure whatsoever from entering pages and pages of DATA statements. Unfortunately, many of the more useful programs are of this sort, so I usually accept the inevitable and resign myself to a few hours of mindless typing with the attitude that the quicker I can get it over with, the better. However, some of the drudgery and frustration associated with entering such programs is due to the time and effort spent in typing the line numbers, typing the word DATA, and typing the commas between each piece of data. In fact the frustration I experience is usually caused by FORGETTING to do some of these things, such as omitting a DATA statement, or putting a comma at the end of a line, or even omitting the line number itself.

In view of the repetitious nature of these errors, I finally decided to do something about it by writing a program that would automatically look after the line numbers, the word DATA and the correct placement of the commas. In other

words, all I have to do is type the actual data (something which I know I can't avoid doing unless I can get someone else to do it!).

The following program does exactly this. It runs on both the Commodore 64 and the VIC 20 (expanded or unexpanded). I think that it will also run without change on all Commodore computers. It makes extensive use of the Commodore's so-called DYNAMIC KEYBOARD to do the routine work. After faithfully typing it into your computer, save a copy of it on disk or tape. Each time you need to enter a program containing a multitude of DATA statements, you should LOAD and RUN this program.

It will first ask you which line number you wish to start at (it must be greater than 12), and then how much to increment that number to get the successive line numbers. It then asks how many DATA statements you wish to have on each line. The first line number will now appear and the data is requested. After entering each piece of data, the RETURN key is pressed. Neither line numbers, nor the word DATA, nor commas are required. The program is aware of when one line of data has been entered and automatically creates the appropriate program line, inserting all the missing ingredients. The program then appends this newly created line to itself, something you can actually see happen if you watch the screen carefully after entering the last piece of data on a particular line. Meanwhile you continue entering the DATA until you want a break or have completely finished. Pressing RETURN at any time without entering any data will automatically cause the existing program to stop executing and LIST itself on the screen, with all its new lines. Your DATA lines can now be proof-read and corrected. If it is necessary to continue entering more data then reRUN the program. When you have finished entering all your data, lines 0 through 12 should be deleted by typing 0 and pressing RETURN, typing 1 and pressing RETURN, and so on. You now have a program consisting entirely of DATA statements and you can continue with whatever else needs to be added. No more missing DATA!

After creating this program I used it to enter the program called LISTING 2 on page 124 of the November, 1983 issue of

COMMANDER magazine. That program has 45 data lines, the word DATA occurs 45 times, it has 684 commas, and 730 separate pieces of numerical data. Using the attached program it took less than 30 minutes to enter and proof-read it. That is a massive savings in time and energy over what I would normally have spent on entering such a program.

```
0 F=0:PRINT CHR$(147)
1 PRINT "STARTING LINE NUMBER":
INPUT Z$:Z=VAL(Z$):IF Z< 13 THEN 1
2 PRINT "INCREMENT LINE NUMBERS
BY":INPUT L$:L=VAL(L$):IF L<1 THEN 2
3 PRINT "HOW MUCH DATA PER LINE":
INPUT N$:N=VAL(N$):IF N<1 THEN 3
4 IF F=1 THEN PRINT CHR$(147):LIST
5 PRINT CHR$(147) "LINE" Z:FOR B=1
TO N:D$="":PRINT "POSITION" B:;INPUT
"DATA";D$
6 IF D$="" AND B=1 THEN PRINT CHR$(147):LIST
7 IF D$="" THEN B=N:F=1:GOTO9
8 A$=A$+", "+D$
9 NEXT B:A$=RIGHT$(A$,LEN(A$)-1)
10 PRINT CHR$(147) CHR$(17) CHR$(17)
Z "D" CHR$(97) A$
11 PRINT "L=" L ":F=" F ":N=" N ":
Z=" Z+L ":GOTO4" CHR$(19);
12 POKE 198,0:POKE 631,13:POKE 632,
13:POKE 198,2:END
```

This article printed in cooperation with other user groups for the benefit of all.

DOUBLE-SPACED LIST

Programmers find it helpful to list programs to the printer so that they can pencil in changes. A single-spaced listing doesn't give you much room to make changes. Here's how to have the printer give you more room. Using a file number greater than 127 will cause the printer to give an extra line feed after every carriage return. Use this as an example:

```
OPEN 128,4:CMD128:LIST
```

To close the file after the printer has completed the LISTing, type:

```
PRINT#128:CLOSE128
```

For the novice, a single-spaced listing can be obtained by using the following:

```
OPEN4,4:CMD4:LIST
```

```
PRINT#4:CLOSE4
```

```
--INPUT*OUTPUT via 20/64 ONLINE,
20/64 HAWAII
```

SOFT DISK ERRORS

by Tom Lynch

Reprinted from the San Fernando Valley Commodore Users Group Newsletter.

While this article is intended for dual drive copiers, the same problem can occur in a single drive backup. The problem is drive errors that appear in different sectors each time a backup is attempted. My SD-2 and 4040 disk drive have unforgiving micro-coded routines within the drives that stop when a disk error is detected. After several attempt, getting errors such as 23, a checksum on different sectors each time, I sensed that a deeper problem existed.

I have found this problem to be rare. It is obviously tied to specific disk drives since recently I found four disks from a 1541 owner all with the same problem. I have several theories; take your pick!

- 1) Weak magnetic recording causes poor read, giving errors in an erratic manner.

- 2) Slight misalignment causing a variation of read signal depending on disk position and other environmental factors.

- 3) Poor diskettes having a variation of permeability across the disk-surface causing variation of read signal.

There are a few ways to copy such a disk. I chose doing a direct disk to disk, sector by sector copy. The difference is letting the program redirect the sector copy again if an error crops up. While this won't cure a hard error, it works wonders on a soft error diskette. The program involves lower level disk commands. Look at your drive manual for details.

```
10 OPEN1,8,15 (OPEN COMMAND CHANNEL)
20 OPEN2,8,2,"#" (ALLOCATE BUFFER)
30 R=20 (SECTORS)
40 FOR T=1 TO 35
42 IF T>=18 THEN RANGE=18
44 IF T>=25 THEN RANGE=17
46 IF T>=31 THEN RANGE=16
50 FOR S=0 TO RANGE
```



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```

60 PRINT#1,"U1:"2;0;(T);(S)
      X-DRIVE 0
70 GOSUB 500      (LOOK FOR ERROR)
80 IF ERROR THEN 60 (DO IT AGAIN!)
90 PRINT#1,"U2:"2;1;(T);(S)
      X-DRIVE 1
100 PRINT"TRACK-"T" SECTOR"S
110 NEXT S,T
120 CLOSE 2
130 CLOSE 1
140 PRINT"FINISHED!"
150 END

```

The above program copies from drive (0) to drive (1). Change it as required. You must first format the clone disk. This can be done by formatting, or using the partially formatted disk after a failed backup. Running the above program, you will copy each sector on to the clone diskette. A good copy will result that can be dup'd without problems.

Sweet mysteries of life. -Tom Lynch

CHAPTER NEWS

FT. WORTH

The Ft. Worth Chapter will meet the **SECOND** Saturday of each month starting January 11. The meeting will be held at General Dynamics Recreation Area, Room 2, at 1:30 PM. Included in the program will be Joe Orr discussing CPM programs for the C128.

Mary Louise Hagemeyer

ARLINGTON

The slate of officers for the Arlington Chapter has been adopted as published in the December newsletter.

The next meeting will be 10 A. M. January 11 at the Downtown Arlington Library. The program will be about Practicalc II and will be presented by Paul Robinson. This is a powerful user friendly spreadsheet with a switchable 80 column display. -Jonathan Riba

FT. WORTH NIGHT

The January 20th meeting of the Night Chapter will be held at St. Elizabeth's Episcopal Church, 5910 Black Oak Lane in River Oaks at 7:00 PM. The program will include a demonstration of new Commodore software for the 64, 128 and Amiga and presented by a representative of Babbage's. There will also be a basic discussion of cartridge based programs and eproms for those who have interest in this subject. -Bruce Umbreit

LIBRARY NEWS

FREWARE

By Tony Velez

Freeware: Alias User supported programs. As the cost of good commercial software continues to remain at the present high level, avid computer users are seeking alternative sources of good computer software to use in their businesses, home, education and entertainment endeavors. The Freeware concept gives the private computer user a choice of where he or she can get good commercial quality software at a price they can't refuse.

Freeware is the name that has been given to software that is written by non-professional programmers. These programs are usually commercial quality programs that is not only written by users but they also dress up and polish the final version of the program to give the appearance that it was done professionally. There are two main differences between commercial and freeware software. The first is the price, you have to pay a high price for commercial software before you can try it out and if it's not what you want you just lost your money. With Freeware you get to try it out in your home to see if it's what you need before you decide if you want to pay anything for it. Secondly the Freeware software is not copy protected so you can make as many copies you want and you are free to give copies to anyone you want without worrying about copyright laws. In fact the author wants you to give away copies to your friends because that's how they make their money. The author usually leaves a message in the first part of the program with their name and address. The message is to the user asking that if they like the program to please send them some money (somewhere between 10.00 to 20.00).

There is no legal obligation to send the author a donation however there are several reasons why you should at least consider a donation if you can. First that is the only way the author can get any royalties for all the time and effort they put into the program. A donation also makes you a registered user and they usually get updated versions, assistance with questions and sometimes the documentation if they are required. As

long as the authors of Freeware programs continue to be compensated for their work we will continue to have a choice of where to get our software. All the authors ask is that if you feel the program is worth it please them something.

As I said before the price for Freeware is one you can't refuse because only you must determine if you will send anything.

Some of the freeware disks currently in the MCCC Library include numbers 419, 430, 813, 829 and 832.

NEW LIBRARY DISKS

COPY THIS DISK!
MCCC #326

```

*****
* >-----MENU-----< DBH CONVERTER   THREE HEXAGONS *
* >-----MILLS-----< >-----JACOBS-----< MIDDLE EARTH *
* FOX TO EASY          FREEZELIST      >---KAPLOWITZ---< *
* VCTYPE TO EASY      ML ASCII EDIT    WENDY'S DDLOADER *
* WORDPR TO EASY      >--MILLS--WOODS--< WENDY'S LOGO *
* PAPERC TO EASY      VOLS OF FUN      LADY OUTSIDE *
* SPEED TO EASY       VOLUMNIZER       TWO WOMEN *
* ML/FOX TO EASY      >-----WOODS-----< FACE IN ROOM *
* AUTO LINE#          ANI-PROMPT        >-----HELLO!-----< *
* FREEZELIST II       SIMFILE           >-----INST-----< *
* DOS 5.1             PGMLISTER         >---READ CPM---< *
* VIC-20 WEDGE        PEEK(VIC/C64)     >--CPM POSTER--< *
* >-----LOVELL-----< MAGICAL #7      >---F COPY---< *
* ALARM CLOCK         >---SCHMIDT---< >--FACT SHEET--< *
* LABEL PRINTER       WAYNE'S DDLOADER >-----< *
* LOTTERY             WAYNE'S COVER     >>>>>>><<<<<< *
* FOX TO SPEED        SGT.MAJOR *
*****

```

BBS'S & TERMINAL
MCCC #430

```

*****
* ----- *
* - C.H.U.G. - - ANOTHER - CTERM.V2 *
* -PUBLIC DOMAIN- - FREWARE BBS - PUNTERPLUS *
* - LIBRARY - *
* ----- *
* - FREWARE BBS - RIBIT.MAKER 2.1B -PLEASE SUPPORT- *
* RIBIT BBS V.2 1B - FREWARE - *
* RIBIT.ML -AUTHORS SO THE- *
* RIBITDOCS -FINE WORK WILL- *
* ----- *
* HAL BOOT - - - - - KEEP COMING - *
* HALSET *
* HAL - FREWARE - *
* HAL.ML12 -TERMINAL PROG.- *
*****

```

USA(C-64)MUSIC
MCCC #431

```

*****
* SYNTHY SAMPLER ----- RUNNING W/NIGHT *
* DOCTOR WHO          MUSIC PLAYER    PIANO MAN *
* FOUR PIECES BOOT    USA FOR AFRICA   JESU *
* FOUR PIECES.CODE    BETHOVEN 1      CANT FIGHT FEEL *
* BOND BOOT           OUT OF TOUCH    MESSIAH *
* BOND MEDLEY 1       HOOKED ON CLASS *
*****

```

FIRST GRADE
MCCC #422

```

*****
* MENU                DRILLS.C2        NUM RECOGNTN.C2 *
* ALPHABETIZING.C2    HURKLE.C2        NUMBER GUESS.C2 *
* CONC. WORDS.C2      KEYBOARD.C2      PICTURES.C2 *
* CONCENTRATION.C2    LETTER.C2        VOWEL MAGIC.C2 *
* DRILL.C2            MEDIAL VOWELS.C2 *
*****

```

STARTER
MCCC #421

```

*****
* WORD PROCESSOR      LIGHT CYCLES 64  TURTLE GRAPHICS *
* SPRITEMAKER 64      MAILING LIST    @W/WP.DOC *
* INTRO TO 6502        MONOPOLE 64    LOADME *
* MUSICMAKER 64        BASIC PRIMER *
* INTRO TO SID         MAILING LIST DOC *
*****

```

ENGLISH/HISTORY
MCCC #420

```

*****
* MENU                WORD SEARCH 1.C3  PRESIDENT QUIZC3 *
* C-64 WEDGE          DIRECTORY         WORLD WARS.C3 *
* DOS 5.1             ANCIENT HIST.C3 *
* WORD HUNT.C3        ELECTION.C3 *
* WORD LADDER.C3      FAMOUS PEOPLE.C3 *
*****

```

AWS
MCCC #433

```

*****
* CONCEPTS          SIMULATION 2      DISK SPEED CHECK *
* C-64 FEATURES       RANDOM NUMBERS    DIRECTORY PRINT *
* HEX DECIMAL 1       STRINGS FOR YOU  DISK DOER *
* HEX DEMO            HEX DEC BIN      NO CLATTER *
* SIMULATION 1        64 MEMORY CHART *
*****

```

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